



Pennsylvania Department of Environmental Protection

25 Technology Drive  
California Technology Park  
Coal Center, PA 15423  
September 21, 2005

California District Office

724-769-1100

Mr. Anthony Drezewski, Land Agent  
Consolidation Coal Company  
State Route 7, US 19  
PO Box 100  
Osage, WV 26543

Re: Blacksville No. 2 Mine  
Brendel Subsidence Claim.

Dear Mr. Drezewski:

The Department has completed its determination of the reasonable cost of repairs for the damages to the Brendel structures. Despite several requests for additional information and clarifications for Consol's estimate, you provided no information beyond your original 2002 damage estimate. Therefore, we proceeded with the information available to us. The Department has determined the repair cost to be \$926,840.80. Enclosed is a copy of my report (minus the attachments) outlining how this cost was determined.

The Department intends to issue an Order to Consol in approximately thirty (30) days from the date of this letter requiring you to pay the Brendels \$926,840.80. If you want to discuss our estimate, please call me at 724-769-1087 as soon as possible.

Sincerely,

J. D. Floris, P.E.  
Civil Engineer  
District Mining Operations

Enclosure



# **BRENDEL DAMAGE ESTIMATE**

**Consol Energy  
Blacksville No. 2 Mine  
Wayne Township, Greene County, Pennsylvania**

**Claim Nos. SA1492 and SA1493**

**J. D. Floris, P.E.  
Civil Engineer**

**September 2005**

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**List of Attachments**

<b><u>Attachment No.</u></b>	<b><u>Description</u></b>
1	Brendel Cost Estimate
2	Review Notes

## **INTRODUCTION**

Consol Energy operates the Blacksville No. 2 Mine in Wayne Township, Greene County, Pennsylvania. This operation consists of a high production longwall unit with room and pillar sections for development. Roy and Diane Brendel own real property, including surface structures, over the Blacksville No. 2 Mine. Consol conducted longwall mining operations beneath the Brendel's property causing material damage to their surface, including their surface structures. Consol and the Brendels were unable to agree upon the cost of repairs for the subsidence damage to the structures prompting the Brendels to file a claim with the Pennsylvania Department of Environmental Protection. As part of the claim process, the DEP must determine the reasonable cost of repairs to the damaged surface structures. This report explains how the Department determined its reasonable cost of repairs.

## **DESCRIPTION**

The structures owned by the Brendels, which are located over Consol's 4R longwall panel include:

1. Thralls House (main house occupied by the Brendels)
2. Apple House (rental house)
3. Horse barn
4. Chicken coop
5. Pig pen
6. Car barn
7. Log house
8. Swimming pool
9. Storage shed
10. Sheep pen

During November 2000, each of these structures was undermined by Consol's 4R longwall panel with a depth of cover of approximately 625'. The Brendels reported that damage occurred to the Apple House on August 17, 1999, when the previous longwall panel was mined.

Prior to the 4R panel passing beneath the structures, Consol performed a pre-mining inspection of the structures. In addition, Consol installed mitigating measures at the Thralls and Apple Houses to attempt to minimize the subsidence damage. These measures included the installation of bracing, crib supports, shoring, and trenching. Despite their efforts, both the Thralls House and the Apple House received material damage.

## **HISTORIC DESIGNATION**

On May 12, 1999, the Thralls House, nine (9) contributing structures (including the Apple House), and nine (9) acres of land were placed on the National Register of Historic Places. The Thralls House was placed on the National Register because of its architectural significance and is considered "an important local interpretation of a national architectural style". The architectural style is Spanish Revival.

Since the Thralls and Apple Houses are architecturally significant and listed on the National Register, the repairs to each must meet the Secretary of the Interior's Standards for the Treatment of Historic Properties; Standards for Rehabilitation/Restoration. Meeting these standards makes the repairs more time consuming and increases some material costs, making the overall repairs more expensive than similar repairs to a conventional "non-listed" house.

## **THE ESTIMATES**

### **Consol Estimate**

Consol Energy submitted a damage estimate dated February 25, 2002 to the Department. The estimate was prepared by FCI Associates of Monongahela, Pa. and placed the total structural damage at \$529,654.59. I found several deficiencies in the FCI estimate, including but not limited to:

- The estimate was based on 2002 costs, which were valid at the time, but now need updated.
- The costs did not account for the architectural significance of the structures and special standards for restoration.
- It was not clear as to how the Thralls House would be leveled and the footings installed.
- It did not address leveling the Apple House.
- The architect used for the project was not registered in Pennsylvania and did not certify that the FCI estimate and scope of work would restore the structures to historic standards.

The Department made several written and verbal requests to Consol to address these deficiencies before we finalized our review of the estimate and determined the reasonable cost of repairs. For whatever reason, Consol did not respond to our requests and did not supply additional information.

### **Brendel Estimate**

On March 11, 2005, the Department received several estimates submitted on behalf of the Brendels by their attorney. These documents included:

1. Glance and Associates, Inc. – Thralls House and Related Structures Detailed Cost Estimate.
2. Landmark Design Associates, Inc. – Historic Rehabilitation Outline Specifications, July 2004.

3. Patton Electric – Proposal for Electrical Wiring.
4. Cole Plumbing and Heating – Proposal for Plumbing and Heating.
5. Pennsylvania Historical and Museum Commission; October 22, 2004 – Review of Specifications and Drawings.
6. Landmark Design Associates, Inc. – Drawings: Construction Notes and Specifications.
7. Taylor Structural Engineers, Inc. – Design Drawings: Remediation of Subsidence Damage.

The Brendel's damage estimate totaled \$1,417,994.41. The Department requested that the Brendels provide additional information and clarifications for their estimate, which they did on July 11 and 12, 2005.

The Brendel's estimate was thorough, organized, and certainly all inclusive. The main problems with the estimate were that it included work that went beyond that which is necessary to repair the subsidence damage, line items not considered material damage, and some inflated costs and/or man-hour requirements for certain tasks. Overall, however, it was a good estimate and was the basis for determining the reasonable cost of replacement.

### METHODOLOGY

It was not the Department's purpose to develop a separate, third damage estimate but rather to use the most complete and reasonable of the two estimates submitted. I chose the Brendel estimate as a basis for developing the reasonable cost of repair. I chose this estimate not only because it was complete and organized, but because of the expertise of the consultants in historic restoration and the fact that the plans and specifications were reviewed by the Pennsylvania Historical and Museum Commission, Bureau for Historic Preservation.

Following several site visits and a thorough review of the plans and specifications, I reviewed each line item in the "Construction Cost Estimate" (Attachment 1) prepared by Glance Associates, Inc. for the Brendels. If a line item seemed too high in general or compared to the Consol estimate, I compared it to the 2004 RS Means Cost Estimating Data. If I felt the difference was significant, I adjusted the "Glance" cost. All costs that were adjusted were then increased by 7.4% (the MSI Program Construction Cost Inflation Factor) to bring it up to 2005 costs. There were other line items, such as temporary housing for the occupants, which are covered under "incidental costs" that are not part of the structure damage. Line items which were considered unnecessary to the completion of the work, such as geotechnical services, were eliminated, as were some upgrades to the structures. In each case where a line item was altered, a note was made in the "Review Notes" (Attachment 2) explaining the rationale and/or calculations for the revision. Generally, costs to repair specialty items such as tiles, obsolete materials, etc. were accepted. Costs necessary to preserve the historic fabric of the structures were also accepted. After the line items were reviewed and the revisions made, they were totaled. This total was then increased 10% for overhead and an additional 10% for profit.

### **SUMMARY**

**Based on my field visits and my review of the information available, I determined that the reasonable cost of repairs for the Brendel damage claim to be \$926,840.80.**